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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT, Article 36 and Rule 70)

REC'D 07 MAY 2004

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PCT

Applicant's or agent's file reference P0003	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/KR2003/000167	International filing date (day/month/year) 25 JANUARY 2003 (25.01.2003)	Priority date (day/month/year) 28 JANUARY 2002 (28.01.2002)
International Patent Classification (IPC) or national classification and IPC IPC7 A46B 9/08, A46B 7/06		
Applicant PARK, Hyo-Moon		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 4 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 23 AUGUST 2003 (23.08.2003)	Date of completion of this report 29 APRIL 2004 (29.04.2004)
Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer SONG, Hyun Jung Telephone No. 82-42-481-5942 

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/KR2003/000167

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☐ the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the claims:
 pages _____, as originally filed
 pages _____, as amended (together with any statement) under Article 19
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the drawings:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____
- ☐ the sequence listing part of the description:
 pages _____, as originally filed
 pages _____, filed with the demand
 pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language English which is

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☒ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheet _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed." and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION

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V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims 1-3	YES
	Claims	NO
Inventive step (IS)	Claims 1-3	YES
	Claims	NO
Industrial applicability (IA)	Claims 1-3	YES
	Claims	NO

2. Citations and explanations (Rule 70.7)**A. Reference is made to the following documents:**

D1: US 4691405 A (JOSEPH C. REED) 8 SEP. 1987 (08.09.1987)
D2: US 5465450 A (VICTOR A. HUMPHRIES) 14 NOV. 1995 (14.11.1995)
D3: WO 96092165 A (PROCTER & GAMBLE CO.) 1 FEB. 1996 (01.02.1996)
D4: JP 6-165712 A (IMASAKA KAZUKO) 14 JUN. 1994 (14.06.1994)
D5: KR 96-26579 U (CHO, YEON SANG) 17 AUG. 1996 (17.08.1996)
D6: KR 93-22848 U (CHO, YEON SANG) 25 NOV. 1993 (25.11.1993)
D7: KR 95362 Y1 (PARK, HYO MOON) 28 JUN. 2000 (28.06.2000)

B. Reasoned statement with regard to novelty and inventive step

The prevent invention relates to a toothbrush, characterized by a brush piece mounted on a front end of a brush part with a protruded part slanted upward on the top surface; an operating plate to allow the brush part to expand; and first and second mounting grooves formed systematically for having a mounting protrusion snapped therein on an inner front wall of a guide.

The prior art document D1 discloses a toothbrush having a pair of adjustable bristle-mounting tabs which pivot relative to a bristle-mounting base so that a bristle mounted on the tabs may deflect.

D2 discloses a toothbrush with a head part which has at least one region thereof weakened so as to allow deformation in the head part to suit the shape of a user's dental arches.

D3 discloses a toothbrush having a handel and a flexible bristle-bearing head. When the toothbrush is in its normal stress-free configuration, the free ends of bristles form a concave profile.

D4 discloses a toothbrush which has a brush head formed bendably relatively to a gripping part.

(Continued on Supplemental Sheet.)

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Supplemental Box

(To be used when the space in any of the preceding boxes is not sufficient)

Continuation of:

Box V

Documents D5 and D6 disclose a resilient toothbrush, wherein the head has a form of segments and a flexible pin is pierced into the segments.

D7 discloses a toothbrush having an unfolding head composed of many pieces and leaf springs which penetrate the pieces.

The background art disclosed in the documents D1-D7 does not disclose a structure for angle adjustment with a slanted protrusion or a brush piece pushed by a fore end part of an operating plate and mounting grooves for having a mounting protrusion snapped therein. In addition, the prior art does not teach or fairly suggest an angle adjustment structure with a slanted protrusion, which is made by push of an operating plate.

Therefore, claims 1-3 meet the criteria set out in PCT Article 33(2) and (3) with respect to novelty and inventive step.

C. Reasoned statement with regard to industrial applicability

Claims 1-3 meet the criteria set out in PCT Article 33(4), because all the claims are considered to be industrially applicable.